For Authorized
Service Personnel Only:

AM-8000
Service Manual

DSS-10619-00, A01

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To re-order this document, request part number DSS-10619-00

FCC Notice

This equipment has been assembled using components that have been certified under a Declaration of Conformity to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult your reseller or an experienced radio/TV technician for help.

Canadian Department of Communications Compliance Statement

This equipment does not exceed Class A limits per radio noise emissions for digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications. Operation in a residential area may cause unacceptable interference to radio and TV reception requiring the owner or operator to take whatever steps are necessary to correct the interference.

Avis de Conformité aux Normes du Ministère des Communications du Canada

Cet équipment ne deapsse pas les limits de Classe A d'émission de bruits radioélectriques pour les appareils numeriques tels que prescrites par le Règlement sur le brouillage radioélectrique établi par le ministère des Communications du Canada. L'exploitation faite en milleu résidential peut entrainer le brouillage des réceptions radio et tele, ce qui obligerait le propriétaire ou l'opératour à pendre les dispositions nécessaires pour en éliminer les causes.

Battery Warning

CAUTION: Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Discard used batteries according to the manufacturer's instructions.

ATTENTION: Il y a danger d'explosion s'il y a replacement incorrect de la batterie. Remplacer uniquement avec une batterie du même type ou d'un type recommandé par le constructeur. Mettre au rébut les batteries usagées conformément aux instructions du fabricant.

This computer contains a 3-volt lithium battery. When necessary, replace the battery with CR2032 type only. Use of other batteries may present a risk of fire or explosion. Replacement batteries may be ordered from your authorized Alpha Micro reseller.

Electrical Warning

This equipment contains components that can be damaged by static electricity. Follow all electronic discharge precautions when handling the equipment. For example, touch the metal back panel of the CPU or peripheral chassis to dissipate any electrical charge before touching the circuit boards or equipment within the chassis. After turning off power, before you open your computer chassis, unplug the cord from the electrical outlet to guard against electrical shock.

SOFTWARE SECURITY DEVICE IDENTIFICATION NUMBER: _____

The Alpha Micro Software Security Device (SSD) is a customized integrated circuit that personalizes the computer, providing identity verification for it. Certain Alpha Micro and non-Alpha Micro software may require that your computer contain an SSD in order to run software that has been customized to run only on your computer.

Please enter the identification of your SSD above. The SSD identification number should be on your computer ID label under "SSD Serial No." (Another way of finding the number is to look at the SSD itself. The SSD is located in an integrated circuit location on the AM-8000 Multifunction I/O board; its identification number is printed on the SSD itself.) Software vendors may ask you for the SSD number if they are customizing software to run only on your computer.

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Table of Contents

INTRODUCTION....1
ACCESSING YOUR COMPUTER....1
ELECTRONIC EQUIPMENT HANDLING PRECAUTIONS....1
HARDWARE CONFIGURABLE OPTIONS....2
Printed Circuit Board Configurations....2
Replacing the Time and Date Battery....5
SSD Chip Removal....6
UPGRADING AM-8000 ON-BOARD MEMORY....7
Removing Memory DIMMs....7
Installing Memory DIMMs....7
PERIPHERALS....8
Installing Additional 3-1/2” Peripherals....8
Installing Additional 5-1/4” Peripherals....8
Additional Documentation for Peripherals....8
DISK DRIVE REPLACEMENT AND WARMBOOT RESTORE....9
System Administrator Tools....9
Formatting DVD-RAM Media....10
Adding another hard disk....11
Restoring the AM-8000 to a fresh or wiped hard disk (warm boot)....13
Restoring just one .AMD file from a "Ghosted" backup....15
ON-LINE DOCUMENTATION....15
APPENDIX A - AM8000 OPTIMAL BIOS SETTINGS....17

Table of Figures

Figure 1: Static Protection Wrist Strap....2
Figure 2: AM-8000 CPU Board Configuration....3
Figure 3: AM-8000 Multifunction Coprocessor Board Configuration....5
Figure 4: SSD Chip Removal Tool....6

INTRODUCTION

This document contains instructions which are intended only for authorized service personnel. AM-8000 computers contain a high-output power supply, which produces current levels high enough to make it unsafe for unauthorized persons to perform work inside the chassis.

This document describes the AM-8000 computer package in the deskside chassis. It covers the following procedures:

- Removing your computer's side panel.
- Electronic equipment handling precautions.
- Printed circuit board configuration options.
- Installing memory.
- Peripheral installation.

ACCESSING YOUR COMPUTER

When adding additional equipment or servicing your computer, you will need to unlock the side panel (the one with the latch), swing the panel out, and remove it. This will expose the inside structure of your computer, including the power supply, main logic boards, and peripherals.

Lay the case down so that the open side is up. This will facilitate gaining access to the internal system areas.

ELECTRONIC EQUIPMENT HANDLING PRECAUTIONS

With the AC power cord unplugged and the side cover removed, the components inside your computer are vulnerable to damage caused by static discharge. Your body and clothing can store an electrical charge that can damage or destroy unprotected electronic components. Before handling any computer hardware, make sure your work area is properly protected against static discharge. There are a number of commercially available static protection devices, like the wrist strap shown in Figure 1, designed specifically to protect your equipment from harmful static discharge.

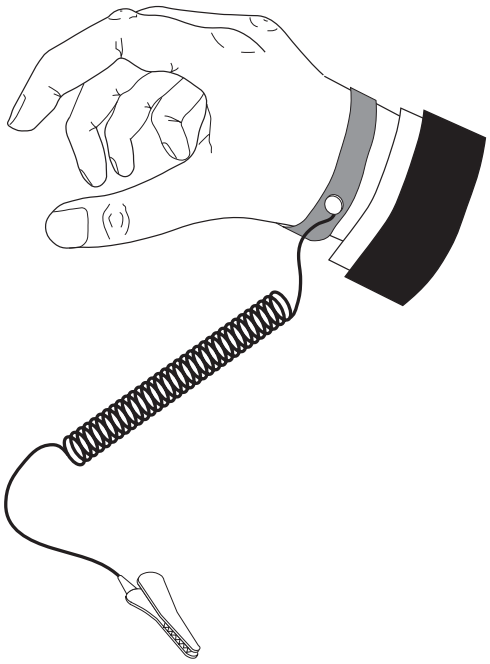


Figure 1: Static Protection Wrist Strap

HARDWARE CONFIGURABLE OPTIONS

The following sections summarize the configuration options available to let you tailor your hardware to your needs. Most of these options require access to the main circuit boards inside the computer, and should be performed only by qualified technical personnel. Contact your VAR if you need assistance.

Printed Circuit Board Configurations

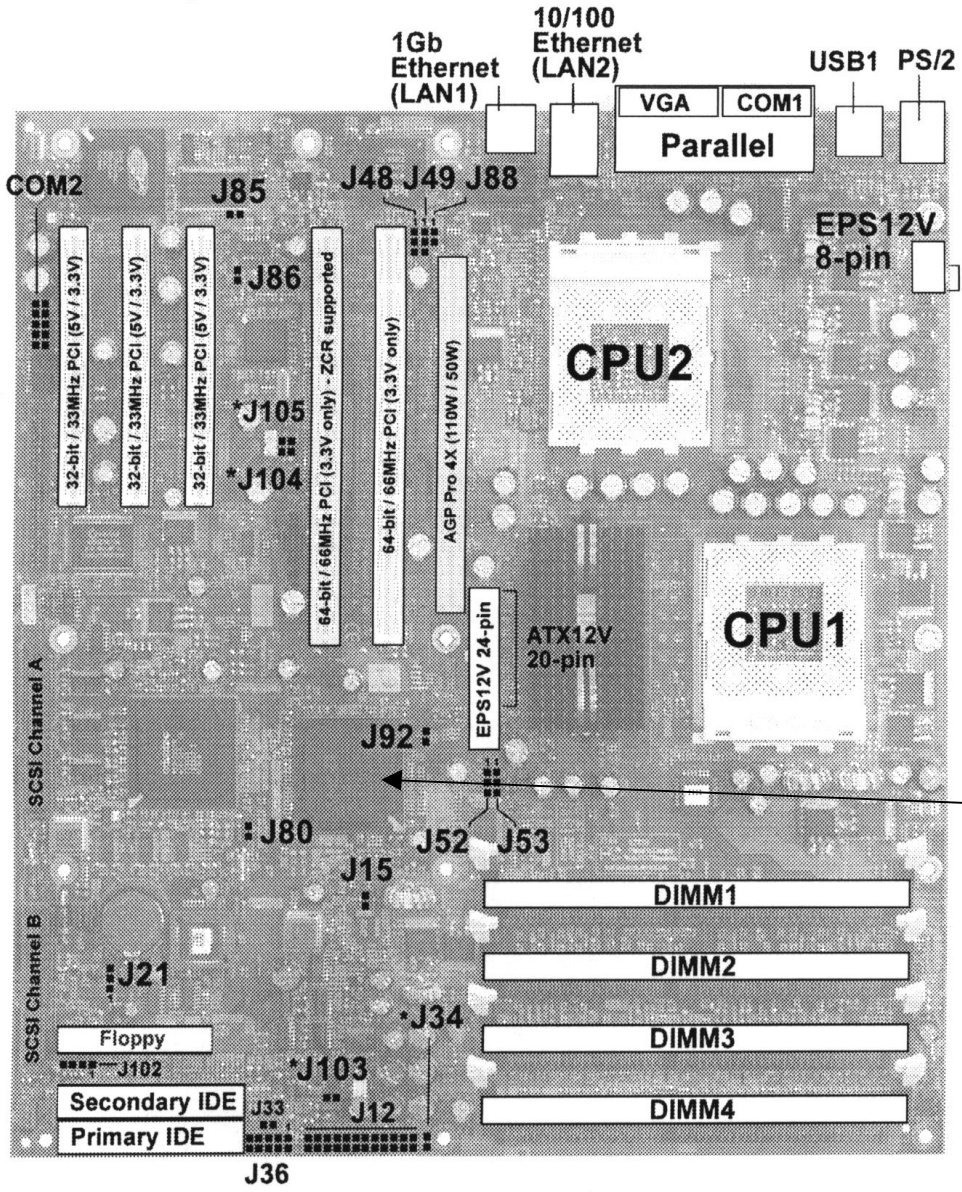
AM-8000 CPU Board

The AM-8000 CPU board is the primary board in your system. Most other boards contained in the system actually plug into the CPU board, including the memory DIMMs, system multifunction I/O board, and other special function boards. This board also contains the following circuitry:

- Two Athlon MP high speed processors
- SCSI controller, with support for two Ultra 320 SCSI busses
- Gigabit and Fast Ethernet communication ports
- Four DDR DIMM sockets for support of up to 4GB of PC2100 Registered DDR RAM
- Support for ATA-100/66/33 IDE and ATAPI devices
- Two 9-pin serial I/O ports (with modem control)
- One 25-pin SPP/ECP/EPP parallel port
- Integrated video graphics controller for system display console
- PS/2 keyboard and mouse ports
- CPU temperature and voltage monitoring
- Expansion slots for additional serial I/O and other specialized functions.

AM-8000 CPU Board Configuration

Figure 2 shows the AM-8000 CPU board configured as shipped by Alpha Micro. The standard jumper positions are listed along side the figure. All jumpers should be left in their factory configured positions.



Shorting blocks installed:

J21	1-2
J48	1-2
J49	1-2
J52	2-3
J53	2-3

CPU ID label with 12 digit CPU PIC number

Figure 2: AM-8000 CPU Board Configuration

If you ever need to replace the AM-8000 CPU Board, you will need to enter the 12 digit CPU PIC number into your system software. The CPU PIC number is located on the CPU board as shown in Figure 2. Write this CPU PIC number down before installing the CPU board. The first time you boot up your AM-8000 after replacement of the CPU board, follow the procedure below to identify the new CPU board to the system software:

- Once the AM-8000 starts to boot, depress the CTRL C key combination for the boot job (VTM1) and make sure the job is at command level.

- Depress the ALT TAB key combination on the keyboard to display the AM-8000 System Diagnostic window.

- Mouse click on *Configure.* The AM-8000 configuration screen will be displayed.

- Move the mouse cursor over the "*Magic Code*" input box, click inside the box, and type in the 12-digit number of the CPU PIC you wrote down previously from the label on the new CPU board.

- Depress RETURN on the keyboard. After a short period of time, if the CPU PIC installation was successful, you should see the message *"Verification passed"*. If you typed the wrong 12-digit number, the following error message should appear:

  ?Magic code verification failed - please re-enter OK

  If this happens and you did not make a mistake typing the 12-digit number, mouse click on *Tools* in the AM-8000 diagnostic window. Select Control Panel. In the Address box, select the Down Select button. Browse to the C:\AM8000 folder. Browse in the AM8000 folder and find "amcfg.cfg" file. Email this file to support@alphamicro.com , identifying who you are, what your system serial number is, and the CPU PIC that you entered.

AM-113-50 MultiFunction Coprocessor

The AM-113-50 Multifunction Coprocessor board is a PCI compatible board that plugs into the first 32-bit PCI slot on the AM-8000 CPU board. It contains the following functions:

- SSD (Software Security Device) chip
- Four high performance serial ports
- One paddle card bus for externally connecting up to 15 serial I/O cards (8 ports per card)
- Hardware timer
- Optional uninterruptible power source (UPS) monitor port
- Optional front panel display port

Up to two AM-113-50 Multi-Function boards may be installed in the AM-8000, providing support for up to 30 serial I/O cards via the AM-359 boards (8 ports per card).

AM-113-50 MultiFunction Coprocessor Board Configuration

The AM-113-50 Multifunction Coprocessor board has been factory tested and shipped with its configuration jumpers set in their standard default positions, as specified in Figure 3. The only user-configurable jumpers are the board addressing jumpers. All other jumpers should be left in their factory configured positions.

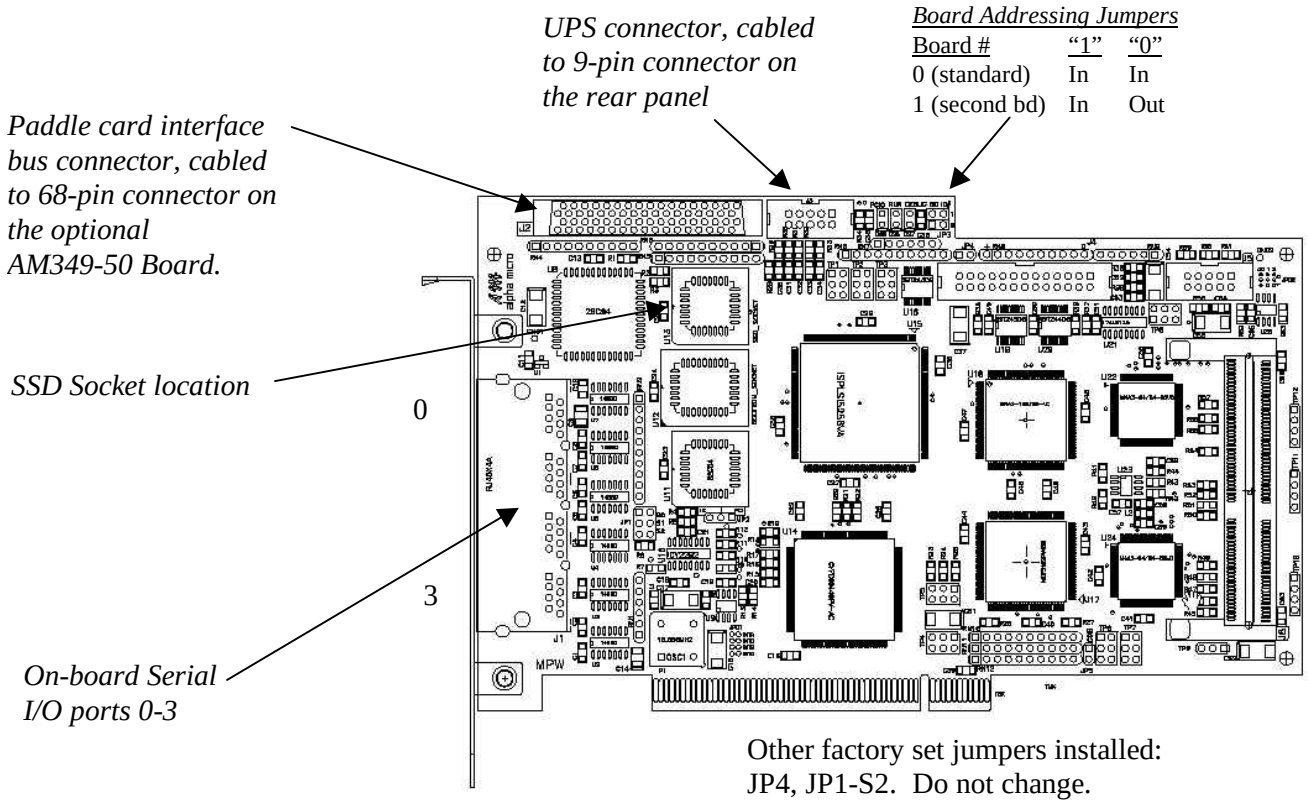

UPS connector, cabled to 9-pin connector on the rear panel
Board Addressing Jumpers
Board # "1" "0"
0 (standard) In In
1 (second bd) In Out
Paddle card interface bus connector, cabled to 68-pin connector on the optional AM349-50 Board.
SSD Socket location
0
3
On-board Serial I/O ports 0-3
Other factory set jumpers installed:
JP4, JP1-S2. Do not change.

Figure 3: AM-8000 Multifunction Coprocessor Board Configuration

Replacing the Time and Date Battery

When replacing the battery on your CPU board, always be sure to power-down the system first! DO NOT replace the battery with the power on! As always, when opening your computer chassis, take proper precautions against electrostatic discharge, which can seriously damage system components.

The board uses one three-volt lithium battery (part #CR2032) that will last for approximately two years. To remove the existing battery, which is about the size of a quarter, you must slide it out from under the top spring contact. It may be necessary to lift the top spring contact slightly to remove the battery from the plastic well that holds it in place. ***Do not bend the spring arm***, or you will lose the contact tension and the battery backup will be intermittent.

When installing the new battery, make sure the positive (+) side is facing up and the top spring arm contact is pressing down firmly to hold it in place.

After installing a new battery, the system BIOS setting will be reset to factory defaults. These are not optimized for the AM8000. In Appendix A, you will find the optimal settings. See the following section for restoring your BIOS settings to those optimized for the AM-8000.

Restoring Your BIOS Settings

Besides the time and date, the AM-8000's battery also maintains the system setup parameters and boot device parameters These are stored in AM-8000's on-board BIOS chip. Therefore, when you remove and replace the battery, your BIOS settings will be lost. After you install the new battery and turn system power on, you need to access the BIOS Configuration menu by pressing F2 during POST and restore your settings. Refer to the *AM-8000 Owner's Manual* for additional information.

If you do not use the BIOS configuration menu to restore your settings, the system will drop into standard factory defaults and boot the AM-8000 with parameters which are not optimized for the system. Yet, when it does start to boot, the AlphaShell.Exe will boot the system with AM8000.MON and AM8000.INI as the system parameters..

Once the system is up and running, log to OPR: and enter the current time and date. Reboot the system to initialize the system up time.

SSD Chip Removal

The SSD chip is located at U13 on your AM-113-50 Multifunction Coprocessor board, as shown in Figure 3. The type of socket used for the SSD chip requires a special tool for chip removal. If you ever need to remove and replace this chip, be sure to use the correct tool, as shown in Figure 4.

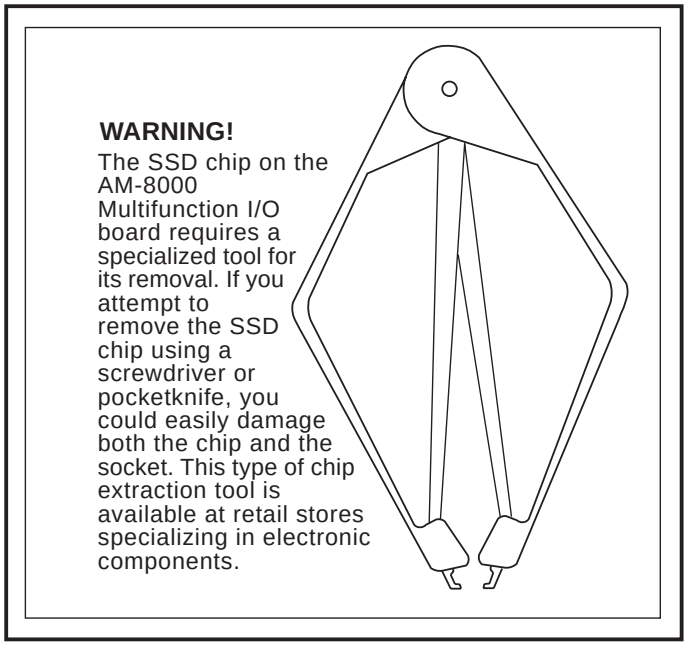

WARNING!
The SSD chip on the AM-8000 Multifunction I/O board requires a specialized tool for its removal. If you attempt to remove the SSD chip using a screwdriver or pocketknife, you could easily damage both the chip and the socket. This type of chip extraction tool is available at retail stores specializing in electronic components.

Figure 4: SSD Chip Removal Tool

UPGRADING AM-8000 ON-BOARD MEMORY

In order to gain access to the AM-8000 on board memory expansion slots, you will need to remove the two drive cages. First, make sure the AM-8000 power cord is unplugged from the AC source. Unplug the cables attached to any peripherals installed in the drive cages. Then, pull the appropriate quick release lever for each drive cage towards the rear of the cabinet to release each drive cage. After installing the memory DIMMs, reinstall the drive card cages and re-cable the peripherals.

The AM-8000 CPU board has four on-board DIMM (dual inline memory module) expansion slots, which support PC2100 DDR RAM modules. Should you want to replace or upgrade any of these DIMMs, first remove the existing DIMMs, then install new ones, following the procedures below.

Removing Memory DIMMs

To remove a DIMM from its connector:

1. Press out on the retaining latches until the memory module pops up.
2. Lift the DIMM out of the connector

Installing Memory DIMMs

The AM-8000 supports a minimum of 512MB and a maximum of 4GB of main memory. Before attempting to install any memory, make sure that the memory you have is compatible with the AM-8000. Use Alpha Micro PFB-00719-XX or equivalent memory to expand your system.

To install memory expansion DIMMs in the AM-8000 CPU board, use this procedure:

1. Always install memory in order, starting with DIMM Bank 1 (closest to the microprocessor chips on the board). See Figure 2.
2. Make sure that the DIMM aligns properly with the memory slot. The modules are keyed to ensure that the memory DIMM is properly oriented.
3. Gently push the memory module into the desired slot. Once properly seated, the retaining latches on each end of the connector will close and secure the module into the slot. Sometimes you may need to close the latches yourself.

After installing the DIMMs, the next time you power on the system, the memory will be detected.

Currently, the maximum memory available to AMOS is 750MB. This limitation is imposed by memory utilization by some of the AM-8000 supporting software. You may enter the AMOS RAM size in the *General* tab of the AM8000 configuration screen. It has a data input box with the current allocation in MB displayed. We recommend 2GB of memory for the system with a maximum of 750 MB for AMOS.

PERIPHERALS

Your computer system cabinet can hold up to ten peripherals, making a wide range of configurations possible. The peripheral bays are structured as follows:

- Four 5-1/4” front accessible bays, typically used to mount tape backup devices, CDs, and other 5-1/4” removable media peripherals. Your DVD-RAM is mounted on one of these bays.
- One 3-1/2” drive cage (upper cage) that can hold up to three 3-1/2” peripherals, with the top two peripherals front accessible. Your floppy diskette drive is mounted in one of the front accessible positions of this drive cage.
- One 3-1/2” drive cage (lower cage) that can hold up to three 3-1/2” peripherals, all internally accessible only. The main system disk is usually mounted in the bottom position of this drive cage.

Installing Additional 3-1/2” Peripherals

Locate the two 3-1/2” drive cages and determine which drive cage you want to install the new peripheral. Each cage has a quick release lever so that you can easily remove either of the cages completely from the cabinet. Pull the appropriate quick release lever towards the rear of the cabinet to release the selected drive cage.

If you are installing the peripheral into one of the two top slots in the upper drive cage and desire access to the peripheral from the front, you will need to remove the plastic drive bay cover at the very front, and then remove the metal plate just behind the plastic cover by twisting it back and forth until it breaks off. Don’t take off the plastic covers and metal plates for the drive bays that you are not using now.

Mount the peripherals into the drive cage using standard hardware. When you have completed the installation of each peripheral into the drive cage, reinstall the drive cage into the cabinet and plug in both power and signal cables into each peripheral.

Installing Additional 5-1/4” Peripherals

Determine the slot to add the new peripheral and take off the plastic drive bay covers and metal plates for that position, as described in the previous section. Take two pieces of the Tension Clips (originally supplied with your computer system) and mount them onto the sides of the 5-1/4” peripheral. Make sure that the metal portion is angled on the outside and facing forward. Then slide the peripheral into the drive bay until you hear a click. Complete the installation by plugging in both power and signal cables into the new peripheral.

Additional Documentation for Peripherals

Each peripheral device sold by Alpha Micro is covered by its own set of installation instructions. The installation instructions include information on jumper settings, termination, and cabling. Before installing a peripheral, make sure you read the documentation pertaining to the device.

If the documentation was not included with your peripheral device, it is probably contained on the AlphaCD which is distributed to all Alpha Micro Value Added Resellers periodically, and can be found on the Alpha Micro web site, www.alphamicro.com in the Documentation section.

DISK DRIVE REPLACEMENT AND WARMBOOT RESTORE

There are a few situations that will require the system administrator to work with disk drives and disk media from the AM-8000 Tools. All these procedures must be done on the system console.

- Formatting DVD-RAM media
- Adding another hard disk.
- Restoring the AM-8000 to a fresh or wiped hard disk (warm boot).
- Restoring just one .AMD files from a Ghosted backup.

Before beginning any of these procedures, make sure you have a current AM-8000 “warm-bootable” CD or DVD.

The following instructions list the screen titles, important options, and the actions you should take using the following syntax:

⌈screen or box title or top line
<selected item> *action for you to do* [keyboard key] **keyboard input**
(action notes and choices)

System Administrator Tools

Accessing the AM8000 Tools

To use the new AM8000 System tools:

Press ALT/TAB until the AM8000 System screen appears.
ALT/**T** will open the <Tools> menu.

This gives you access to various XP-Embedded tools (for formatting disks, etc.) and to Norton Ghost for creating "warm boot" and other DVD/CD backups. The system administrator should know how to use Windows utilities and how to use Norton Ghost software.

Accessing the AM8000 Disk Maintenance screen

Many of these administrative tasks require access to the AM8000 Disk Maintenance screen (You may also use you mouse to point the Menu Item and click to select.):

Press ALT/TAB *to:*
⌈AM8000 System …..
Press ALT/**T** (opens Tools)
<…. > *Press* ↓ *to:*

<Control Panel> *Press* [ENTER]
⌈Control Panel
<…. > Press [↓] to:
<Administrative Tools> *Press* [ENTER]
⌈Administrative Tools
<…. > *Press* [↓] *to:*
<Computer Management> *Press* [ENTER]
⌈Computer Management
<…. > *Press* [↓] *to:*
<Storage> *Press* [→]
<…. > *Press* [↓] *to:*
<Disk Management> *Press* [TAB] *and again* [TAB]

Though hard to see, the focus should now be in the lower right section of the screen which typically has the following fields: (Use the mouse to enlarge the box to see the items.)

<Disk 0 > <System Volume (partition)> <Data Volume (partition)>
<CD-ROM 0>

Use the mouse to select item or use the arrow keys and notice how the fields change. Use [↓] and [↑] keys to move between the various drives (usually Disk 0 and CD-ROM 0). The [→] and [←] will select various partitions on Disk 0, etc.

The key sequence [ALT]/**A** *to open Action*
Press **K** *to open All Tasks*

will give you the same menu as right clicking the selected area of the screen.

You should see the physical drive or drives of the system with drive sizes and partition sizes. Once you add a new drive to the system which has not be formatted, it will be displayed in the lower panel with a Black Bar.

From this point, the specific action will depend upon the specific task and will be covered in that section.

Formatting DVD-RAM Media

Access the AM8000 Disk Maintenance screen, as described above. Then:

⌈Computer Management
<Storage> *Press* [→]
<Disk Management> *Press* [TAB] *and again* [TAB]
Press [TAB] *and/or* [arrows] *to:*
<CD-ROM 0> *Press* [→] *to:*
<E:--→ *Press* [ALT]/**A** *to open Action*
Press **K** *to open All Tasks*
Press **F** *to open Format screen*
⌈Format x:
Put in the label you want;
use the FAT32 file system;

Press ENTER *for <OK> to start the format.*
Press ENTER *again for <OK> to confirm the erase.*

If the quick format is available and checked, this will take less than 2 minutes.

Now the DVD-RAM is ready to use from XP Embedded. Now you can copy .AMD files to the DVD-RAM. This process is rather slow, and AMOS should be stopped while copying a large file to the DVD-RAM. Copying a 4 GB .AMD file to the DVD-RAM takes about 2 hours.

Adding another hard disk

Adding another hard disk drive is similar to formatting a DVD-RAM, but with additional steps before the format:

- Physically install the new hardware.
- Configure the new drive by either:

    1. Manually (and slower) as detailed below; or

    2. Do a (fast) Ghost restore of a recent full backup to the new hard disk. See the "*Restoring the AM-8000 to a fresh or wiped hard disk (warm boot)"*.

Details

1. Physically install the new hardware.

    If the new disk drive has a SCSI LVD interface: attach the drive to the SCSI LVD bus (usually the SCSA (A) bus). If the new disk drive is a SCSI single ended interface, attach it to the second (B) SCSI bus.

    If the disk drive has an IDE interface, it can go on either the primary or secondary IDE bus. Be sure to set the disk drive jumpers correctly. If the drive is to be attached to the secondary IDE channel, you will need to provide the IDE cable.

    Each of the 3.5" drive bays can be removed. When re-installing them, make very sure that each locking arm is securely forward.

    There are snap-in peripheral mounting guides in the bottom of the chassis for 5.25" devices. See the *Peripherals* section of this manual for additional details on peripheral mounting.

2. Boot the system.

3. Configure the new hard drive for NTFS, as follows:

    Access the AM8000 Disk Maintenance screen, as described above, or use the mouse to Select:

    ⌜Computer Management
    <Storage> *Press* →

<Disk Management> *Press* TAB *and again* TAB
Press TAB *and/or* [arrows] *to:*
<Disk 0>

Then select with the mouse or use the keyboard to select the new drive (Disk 1 in this example):

<Disk 0> *Press* ↓ *to:*
<Disk 1> *Press* ALT/**A** (opens Action menu)
Press **K** (opens All Tasks)
Press **N** (if available, starts the New Partition Wizard)
Continued below
Otherwise:
Press **F** (opens the Format screen)
And do similar to the instructions below.

⌈New Partition Wizard
<Next> *Press* ENTER
⌈Select Partition Type
<* Primary partition> *Press* ENTER (does Next)
(you can boot off of ANY primary
you can have 4 primaries
OR 3 primaries and 1 extended with 4 logicals.)
⌈Specify Partition Size
<Partition size in MB: xxxx> we normally make the first partition **4251**
Just press ENTER to keep maximum (does Next).
⌈Assign Drive Letter or Path
<* Assign the following drive letter: ?> *Press* ENTER (does Next)
(This can be changed later, but may then require adjusting
the AM8000 configuration.)
⌈Format Partition
<* Format this partition with the following settings:> *Press* TAB
File system: <NTFS> *Press* TAB
Allocation unit size: <default> TAB
Volume label: <whatever> *Enter desired name* TAB
<* Perform a quick format> *Press* SPACE (to select), *then* TAB
< Enable file and folder compression> *leave UN-Checked*
Press ENTER (does Next)
⌈Completing ...
<Finish> *Press* ENTER

When this process is complete, you are done unless you wish to format another partition. If so, jump back to the top of this subsection and repeat the process.

Now mark the desired boot partition (if any) as active:
<Disk 1> *Press* → *to the desired partition*
Press ALT/**A** (opens Action menu)
Press **K** (opens All Tasks)
Press **M** (marks as Active)

1. Configure the new drive for AM8000 operation.

   This can be done by either:

   a. copying the desired sub-directories to the new partition using Explorer; or

   b. creating the desired sub-directories using Explorer, then creating the desired AMOS .AMD pseudo drives using the AM8000 configuration process.

Restoring the AM-8000 to a fresh or wiped hard disk (warm boot).

The procedure to restore the system drive from the Bootable Ghost CD is a little more difficult.

This procedure can be done to any hard disk, including the original drive or a new, larger "sub" drive. Ghost can restore one or more partitions. Ghost can also partition and format hard disks. All of these procedures may destroy previous data, so use caution when performing them.

Insert your bootable DVD into the DVD RAM drive.

Start up the system.

The system will go through the normal BIOS initalization and POST, including the SCSI bus scan. After that, it will display the following option:

⌈Press any key to boot from CD or DVD-ROM *Press* [SPACE]

(If you do not get the above message, then you will need to re-start the system and press [F2] to enter the BIOS settings. Be patient, it takes a while to scan the SCSI buses first.

⌈<Main> *Press* [→] *to:*

<Boot>

On the left is a list that should start with the CD/DVD device. The instructions on the right side of the screen cover changing the order of the list.

When done, *Press* [F10]*, then* [ENTER] . This will reboot the system.)

The next thing you will see is the Norton Ghost PC DOS sign-on screen. With the Ghost menus, anything that is highlighted in WHITE is selected. Generally, use the arrow ([→] [←] [↑] [↓]), [TAB] and [ENTER] keys to navigate.

⌈Norton Ghost 2003…..

⌈About Norton Ghost

<OK> *Press* [ENTER]

<Local > *Press* [ENTER]

<Disk > *Press* [ENTER]

<To Disk > *Press* [↓]

<To Image > *Press* [↓]

<From Image > *Press* [ENTER]

or just (because the F is underlined):

<To Disk > *Press* **F**

⌈Image file name to restore from
<…..>*Press* SHIFT/TAB
<… A: Local drive > *Press* ENTER
⌈
<… > *Press* ↓ (until the DVD-RAM drive is selected.)
<… …… DVD drive > *Press* ENTER
⌈ Name ….
<Ghost CD/DVD Image > *Press* ENTER
⌈Select local destination drive …..
⌈ Drive ……..
< 1 ….. > *Press* ENTER (1 is the normal booting drive.)
⌈Destination Drive Details ….
⌈….. New Size ……
…… <17500> … *Enter* **4251** (or a different desired C: partition size)
Press TAB
Adjust other partition sizes as desired.
<OK> *Press* ENTER
⌈Question: (1822)
<No> *Press* **Y**
⌈Progress Indicator…. (This will take about 4 minutes for drive C:, appropriately longer if you are also restoring other drives.)
⌈Clone Complete (1912)
…. <Reset Computer> *Press* ENTER

The system will now go through the normal BIOS initalization and POST. After that, if you have not removed the DVD-R, it will again display the option:

⌈Press any key to boot from CD or DVD-ROM *Do nothing - let it time out!*

The system should now continue to boot with the Alpha Micro logo, etc., into AMOS 8.0. It will boot into the last configuration saved on the booting DVD.

Getting to the production configuration

If you had changed any of the AM8000 configuration information since creating that booting DVD, such as adding Microsoft printers, COMxx ports, SCSI devices, firewall settings, etc., then you will need to repeat those changes.

In addition, the AM8000.INI, and other customized .INI files, and perhaps even the AM8000.MON, may not be current. Production versions are normally on the AMOS 8.0 .AMD disks on the "Data Volume". AFTER restoring the latest backup (see below), these can be updated by simply MONTSTing from the latest backup copies - like MONTST AM8000 AM8000 - which will re-syncronize the "System Volume" copies.

If the "Data Volume" partition (usually D:) was restored, then restoring the system is done.

If this was the most recent backup of the AMOS data, then the whole procedure is done.

If there is no "Data Volume" (it was not on the backup), then create a data volume using the New Partition Wizard described earlier in this manual.

If necessary, create an AMOS .AMD pseudo drive using the AM8000 configuration process described in the AM-8000 Owner's Manual. Generally we recommend disks of 4 GB or less so that each will fit on a DVD-RAM. However, the choice is yours: Using a large tape drive and/or the Ghost compression will allow backing up much larger .AMD files.

Proceed to restoring the last AMOS backup as appropiate to the backup procedure used. Then, as mentioned above, use MONTST to re-syncronize the "System Volume" copies of important .MON and .INI files.

If you used the above procedure to install a "sub-system" drive, you can change the motherboard BIOS settings to boot off of the "sub-system".

Restoring just one .AMD file from a "Ghosted" backup

If you want to access a few files from a Ghosted backup, you can copy the appropriate .AMD file from the Ghosted backup to the hard disk, configure this copy of the .AMD file as a sub-system drive in the AM8000 Configuration screen, and, if necessary, add it to the booting .INI file. Then you can access all of the AMOS files in the .AMD drive file.

The special part is getting the .AMD disk file from the Ghosted backup. This is done using the Ghost Explorer:

Open Ghost from the AM8000 Tools menu (see above).
Select the Ghost Utilities (↓ to Ghost Utilities and press ENTER).
Then select Ghost Explorer (TAB to Ghost Explorer and press ENTER).
In Ghost Explorer, Open the appropriate drive letter and Ghost file.
Select the desired .AMD file.
Finally, <Extract> the file to the desired location.

ON-LINE DOCUMENTATION

There is on-line documentation on each system. The Adobe Acrobat Reader is also installed on the system which can be used on the Console to review the PDF documentation files. To access the PDF files, use the Control Panel interface to browse to a directory and find the PDF file you desire to read. Double click on the PDF filename and the Acrobat reader will launch and display the document.

We highly recommend that you read the Norton Ghost Guide on the workings of this useful Backup and Restore utility.

APPENDIX A - AM8000 OPTIMAL BIOS SETTINGS

To Enter Setup press F2 during the POST process to enter the motherboard Phoenix BIOS Setup. Use arrow keys to move the cursor to highlight the field to change.

[Main]

System Time	[08:24:00]	(replace with actual time)
System Date	[9/24/2004]	(replace with actual date)
Legacy Diskette A:	[Disabled]	
Legacy Diskette B:	[Disabled]	
> Primary Master	[HL-DT-ST DVD-RAM GSA-]	
Type:	[Auto]	
Multi-Sector transfers:	[Disabled]	
LBA Mode Control:	[Disabled]	
32Bit I/O:	[Disabled]	
Transfer Mode:	[Fast PIO 4]	
Ultra DMA Mode:	[Mode 2]	
> Primary Slave	[None] [auto] [disabled][disabled][disabled][Standard][disabled]	
> Secondary Master	[None] [auto] [disabled][disabled][disabled][Standard][disabled]	
> Secondary Slave	[None] [auto] [disabled][disabled][disabled][Standard][disabled]	

> Keyboard Features

Numlock	[Auto]
KeyClick	[Disabled]
Keyboard Auto-repeat rate :	[30/sec]
Keyboard Auto-repeat delay:	[1/2sec]
Keyboard Error:	[Wait on Error]

[ADVANCED]

Large Disk Access Mode:	[DOS]
Secured Setup Configs:	[No]
Reset Configuration Data:	[No]
PS/2 Mouse	[Enabled]
USB Host Controller	[Enabled]
USB BIOS Legacy Support:	[Disabled]
> Advanced Chipset Control	
Graphics Aperture:	[64mb]
AGP Drive Strength	[FFh]
Memory Cache:	[Enabled]
ECC Config:	[Disabled]
Serr Signal Condition:	[None]
Enable Memory gap:	[Disabled]
AGP FastWrite override:	[Disabled]
AGP 4x Override:	[4x Mode]

> Pci Configuration	
Default Primary Video Adapter:	[AGP]
> PCI device, Slot #1	[Enabled] [Enabled] [0040h]
> PCI device, Slot #2	[Enabled] [Enabled] [0040h]
> PCI device, Slot #3	[Enabled] [Enabled] [0040h]
> PCI device, Slot #4	[Enabled] [Enabled] [0040h]
> PCI device, Slot #5	[Enabled] [Enabled] [0040h]
Enabled SCSI Option Rom	[Enabled]
Enable 10/100 PXE Support:	[Disabled]
Enable Gigabit PXE Support:	[Disabled]
Enable Onboard ATI Option Rom:	[Enabled]
> I/O Device Configuration	
Serial Port A:	[Enabled]
Base I/O address:	[3F8]
Interrupt:	[IRQ 4]
Serial Port B:	[Enabled]
Base I/O address:	[2F8]
Interrupt:	[IRQ 3]
Parallel Port:	[Enabled]
Mode:	[ECP]
Base I/O Address:	[378]
DMA Channel:	[DMA 3]
Local Bus IDE adapter:	[Both]
Floppy Disk Controller:	[Disabled]
Floppy Drive Swap:	[Disabled]
QuickBoot Mode:	[Enabled]
Boot-Time Diagnostic Screen	[Disabled]
Summary Screen:	[Disabled]
> Console Redirection	
Com Port Address	[Disabled]
Console connection	[Direct]
Baud Rate	[19.2k]
Flow Control	[Cts/Rts]
Console Type	[PC ANSI]
Continue C.R. after post	[Off]

[SECURITY]	
Supervisor Password is:	Clear
User Password is:	Clear
Set Supervisor Password	[Enter]
Set User Password	[Enter]
Password on boot:	[Disabled]
Fixed disk boot sector:	[Normal]
Diskette access:	[Supervisor]
Virus Check reminder:	[Disabled]
System Backup reminder:	[Disabled]

[POWER]

Enable ACPI	[Yes]
Power Savings:	[Disabled]
Idle Mode:	[OFF]
Standby Timeout:	[off]
Auto suspend timeout:	[off]
Suspend Mode:	[Suspend]
Hard Disk TimeOut:	[Disabled]
After Power failure:	[Power On]

[BOOT]

CD-Rom Drive
+Hard Drive
00,AIC-7902A: 0 SEAGATE ST318453LW
00,AIC-7902A: 1 SEAGATE ST318453LW
Bootable add in Cards
CD-Rom Drive
+Removable Devices
Legacy Floppy Drives

[EXIT]

Exit Saving Changes	[yes]
Exit Discarding Changes	
Load Setup Defaults	
Save Changes	